## CLAIMS

We claim:

1. A receiver, comprising:

an armature;

a diaphragm; and,

a closed loop having an opposing first expanded and a second expanded regions, wherein the armature is operably attached to the first expanded region and the diaphragm is operably attached to the second expanded region.

2. The receiver of claim 1 further comprising the closed loop having an opposing first and a second regions, wherein the first and second regions are constrained to prevent motion of the first and second regions in a direction parallel to an axis intersecting the first and second expanded regions.

3. The receiver of claim 1, further comprising:

the armature having an effective moving mass; and,

the diaphragm having an effective moving mass, wherein the effective moving mass of the armature is substantially equal to the effective moving mass of the diaphragm.

4. The receiver of claim 1 wherein the closed loop is comprised of a strap.

5. The receiver of claim 4 wherein the strap is comprised of stainless steel.

6. The receiver of claim 4 wherein the strap has a thickness ranging from $5 \times 10^{-4}$ to $3 \times 10^{-3}$ inch and a width ranging from $10 \times 10^{-3}$ to $20 \times 10^{-3}$ inch.

7. The receiver of claim 1 wherein the closed loop is comprised of a wire.

8. The receiver of claim 7 wherein the wire is comprised of stainless steel.

9. The receiver of claim 7 wherein the wire has a diameter having a range of $2.0 \times 10^{-3}$ to $5.0 \times 10^{-3}$ inch.

10. The receiver of claim 1 wherein the closed loop is a quadrilateral.

11. The receiver of claim 10 wherein the quadrilateral is a rhombus.

12. The receiver of claim 1 wherein the closed loop further comprises:

an opposing first and a second regions; and

a first, a second, a third and a fourth portions, wherein the first portion is adjacent the first expanded region and the first region, the second portion is adjacent the first region and the second expanded region, the third portion is adjacent the second expanded region and the second region and the fourth portion is adjacent the second region and the first expanded region.

13. The receiver of claim 12 wherein the first and fourth portions have a substantially equal length and the second and third portions have substantially equal length.

14. The receiver of claim 13 wherein the first and second portions have an unequal length.

15. The receiver of claim 12 wherein the opposing first and second regions are constrained to prevent motion of the first and second regions in a direction parallel to an axis intersecting the first and second expanded regions.

16. The receiver of claim 13 wherein the opposing first and second regions are constrained to prevent motion of the first and second regions in a direction parallel to the line connecting the first and second expanded regions.

17. The receiver of claim 14 wherein the opposing first and second regions are constrained to prevent motion of the first and second regions in a direction parallel to the line connecting the first and second expanded regions.

18. A receiver, comprising:

an armature;

a diaphragm;

an elliptical-like shaped spring having a first axis and a second axis, each of the axes having a distal and a proximate end;

the diaphragm operably attached to the elliptical-like shaped spring near the distal end of the second axis of the elliptical spring; and

the armature operably attached to the elliptical-like shaped spring near the proximate end of the second axis of the elliptical spring.

19. The receiver of claim 18 wherein the elliptical-like shaped spring is constrained near the proximate end of the first axis - a first region; and the distal end of the first axis - a second region; to prevent motion of the first and second regions in a direction parallel to the second axis.

20. The receiver of claim 18 further comprising:

the armature having an effective moving mass; and,

the diaphragm having an effective moving mass, wherein the effective moving mass of the armature is substantially equal to the effective moving mass of the diaphragm.

21. The receiver of claim 18 wherein the elliptical-like shaped spring is comprised of a strap.

22. The receiver of claim 21 wherein the strap is comprised of stainless steel.

23. The receiver of claim 21 wherein the strap has a thickness ranging from $5 \times 10^{-4}$ to $3 \times 10^{-3}$ inch and a width ranging from $10 \times 10^{-3}$ to $20 \times 10^{-3}$ inch.

24. The receiver of claim 18 wherein the elliptical-like shaped spring is comprised of a wire.

25. The receiver of claim 24 wherein the wire is comprised of stainless steel.

26. The receiver of claim 24 wherein the wire has a diameter having a range of $2.0 \times 10^{-3}$ to $5.0 \times 10^{-3}$ inch.

27. The receiver of claim 18, wherein the elliptical-like shaped spring is comprised of stainless steel.

28. A method of reducing vibration in a receiver, comprising the steps of:

providing an armature;

providing a diaphragm;

providing a closed loop, the closed loop having an opposing first and a second expanded regions and an opposing first and a second regions;

operably attaching the armature to the first expanded region; and,

operably attaching the diaphragm to the second expanded region.

29. The method of claim 28 further comprising constraining the first and second regions to prevent motion of the first and second regions in a direction substantially parallel to an axis intersecting the first and second expanded regions.

30. The method of claim 28 further comprising:

the armature having an effective moving mass; and,

the diaphragm having an effective moving mass, wherein the effective moving mass of the armature is substantially equal to the effective moving mass of the diaphragm.

31. The method of claim 28 wherein the closed loop is comprised of stainless steel strap.

32. The method of claim 31 wherein the stainless steel strap has a thickness ranging from $5 \times 10^{-4}$ to $3 \times 10^{-3}$ inch and a width ranging from $10 \times 10^{-3}$ to $20 \times 10^{-3}$ inch.

33. The method of claim 28 wherein the closed loop is a quadrilateral.

34. The method of claim 33 wherein the quadrilateral is a rhombus.

35. The method of claim 28 wherein the closed loop further comprises:

a first, a second, a third and a fourth portions, wherein the first portion is adjacent the first expanded region and the first region, the second portion is adjacent the first region and the second expanded region, the third portion is adjacent the second expanded region and the second region, and the fourth portion is adjacent the second region and the first expanded region.

36. The method of claim 35 wherein the first and fourth portions have substantially equal length and the second and third portions have substantially equal length.

37. The method of claim 36 wherein the first and second portions have unequal length.

38. The method of claim 35 wherein the opposing first and second regions are constrained to prevent motion of the first and second regions in a direction parallel to an axis intersecting the first and second expanded regions.

39. The method of claim 36 wherein the opposing first and second regions are constrained to prevent motion of the first and second regions in a direction parallel to an axis intersecting the first and second expanded regions.

40. The method of claim 37 wherein the opposing first and second regions are constrained to prevent motion of the first and second regions in a direction parallel to an axis intersecting the first and second expanded regions.

41. A method of reducing vibration in a receiver, comprising the steps of:

providing an armature;

providing a diaphragm;

providing an elliptical-like shaped spring, the elliptical-like shaped spring having a first axis and a second axis, each of the axes having a distal and a proximate end;

operably attaching the armature to the elliptical-like shaped spring near the proximate end of the second axis; and,

operably attaching the diaphragm to the elliptical-like shaped spring near the distal end of the second axis.

42. The method of claim 41 further comprising:

constraining the elliptical-like shaped spring near the proximate end of the first axis - a first region; and,

constraining the elliptical-like shaped spring near the distal end of the first axis - a second region,

wherein motion of the first and second regions in a direction parallel to the second axis is prevented.

43. The method of claim 41 further comprising:

the armature having an effective moving mass; and,

the diaphragm having an effective moving mass, wherein the effective moving mass of the armature is substantially equal to the effective moving mass of the diaphragm.

44. The method of claim 41, wherein the elliptical-like shaped spring is comprised of a strap.

45. The method of claim 41 wherein the strap is comprised of stainless steel.

46. The method of claim 44 wherein the strap has a thickness ranging from $5 \times 10^{-4}$ to $3 \times 10^{-3}$ inch and a width ranging from $10 \times 10^{-3}$ to $20 \times 10^{-3}$ inch.